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# Why Managers Make Judgmental Forecasts?(Rather than Use Math Models

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# **"Why Managers Make Judgmental Forecasts? (Rather than Use Math Models.)"**

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## **Abstract**

This paper argues that forecasts based on mathematical models are underutilized in organizations because forecasts based on mathematical models do not offer the organizational and personal gains that judgmental forecasts provide.

## **1.0 Introduction**

Managers often prefer judgmental forecasts to those based on simple mathematical models (SMM). This is in spite of a large literature suggesting the SMM forecasts are more accurate. Why might this occur?

The traditional reasons that judgmental forecasts are said to be preferred include that the poor mathematical skills of managers cause them to avoid forecasts. Also it has been argued that even though managers' mathematical skills may be good, they may not understand the many details and rationales of the art of forecasting. Hence, they may resist the SMM forecasts. A third often cited reason is that managers often see themselves as succeeding by virtue of the hard word and finely tuned intuition into the organization and its markets. Simple mathematical forecasting models, thus, are inconsistent with managers' perceived strengths and critical success factors.

This paper suggests that managers are perfectly rational in not using SMM forecasts because SMM forecasts do not yield the organizational and personal gains that judgmental forecasts provide. The following sections summarize some of the main personal and organization gains not available from SMM forecasts.

## **2.0 Organizational Gains from Biasing Judgmental Forecasts**

### **2.1 Generate Motivation**

Forecasts may be adjusted to motivate various groups of people in the organization towards organizational objectives (Ansari and Euske, 1987; Emmanuel, Otley, and Merchant, 1990, p. 163). Since usually motivation is better served by upward adjustment, it is interesting to note that judgmental forecasts are usually positively biased whereas SMM forecasts are not. For example, a sales manager may create upward trending forecasts to motivate salespeople. However, such forecasts can demotivate, too; if the inventory manager knows this has happened, he may realize that he will be stuck with excess inventory.

### **2.2 Generate Commitment**

If a group works together to develop a forecast, they are likely to be committed to it. If it simply comes from a SMM, there maybe no commitment. Commitment may, in turn, lead to other positive consequences such as better coordination and cooperation (Emmanuel, Otley, and Merchant, 1990, p. 163).

### **2.3 Force Thinking About a Scenario**

A forecast may be created as a technique of inquiry and conflict resolution, thus evoking dialogue and understanding (Singer, 1994).

#### 2.4 Provide Persuasive Rationale

The process of group creation of forecasts is largely that of reasoning and argumentation (Ansari and Euske, 1987). Thus, after such a forecast is made, there is a legacy of reasons and justifications for the forecasts. These reasons and justifications may be crucial in persuading insiders about a course of action and outsiders (like banks) to assist the organization.

#### 2.5 Alter Resource Allocations

Forecasts help determine how resources should be allocated (Ansari and Euske, 1987; Covaleski and Dirsmith, 1986). Thus, forecasts may have to be created to reflect future organizational strategies rather than be purely market-based. This function of forecasting implies that forecasts often are negotiated (Burchell, Clubb, Hopwood, Hughes, and Nahapiet, 1980, Covaleski and Dirsmith, 1986) rather than estimated. Note that such forecasts enable some parts of the organization but also limit the budget and flexibility of other parts of the organization.

#### 2.6 Assist in Communicating the Forecast

If a group works together to develop a forecast, they will become aware of the forecast and the issues it raises. If the forecast simply comes from a SMM, there may be little communication (Emmanuel, Otley, and Merchant, 1990, p. 163).

#### 2.7 Can be Generated by Bottom Up Forecasting

Often organizations define first their profit goals and then work backward to establish sales "forecasts". Then that pro forma budget and forecasts may be adjusted to assure realism. In this way "forecasts" are used not as predictions for the future but organizational targets. The forecasts then have value due to their linkage to the goals.

#### 2.8 Provide Organizational Ritual

Forecasts may be generated as part of the process of establishing a rationalistic, technocratic organizational culture (Ansari and Euske, 1987; Covaleski and Dirsmith, 1986; Singer, 1994); since preferred rituals are celebratory, the forecasts ideally should be upward. The forecasts need not be used.

#### 2.9 Allow Participation

Unlike SMM's, judgmental forecasts allow managers to participate in the forecasting process. Participation has a general relationship to job satisfaction (Emmanuel, Otley, and Merchant, 1990, p. 177).

#### 2.10 Legitimize Managerial Power and Control

Forecasts are approved by top management thereby establishing the organization's official view of the future. As such they legitimize managerial control and managerial vision (Covaleski and Dirsmith, 1986; Cyert and March, 1963).

#### 2.11 Give the Organization a Sense of Control Over The Future

When forecasts are generated by an interactive group process, the participants may gain a sense of control of the organization's future and, thus, may feel more assured and confident in the organization's future (Ansari and Euske, 1987). Langer termed this the illusion of control.

### 3.0 Personal Gains from Biasing Judgmental Forecasts

#### 3.1 Establish Leadership

A manager wishes to project a future that corresponds to his vision for company performance. So he creates forecasts consistent with his vision.

#### 3.2 Are Persuasive

The process of group creation of forecasts is largely that of reasoning and argumentation (Ansari and Euske, 1987). Thus, after such a forecast is made, there is a legacy of reasons and justifications for the forecasts. These reasons and justifications may be crucial in persuading superiors and peers to support a manager's plans and initiatives.

#### 3.3 Are Prestigious

SMM forecasts may be generated for their prestige value but not necessarily used (Ansari and Euske, 1987; Covaleski and Dirsmith, 1986; Singer, 1994). The SMM forecasts may then be adjusted or even replaced by judgment.

#### 3.4 Justify Decisions.

A manager may have already made a decision. To justify his decision, forecasts may be created so that the decision seems a good one.

#### 3.5 Reflect Managerial Reputations

To support a managers reputation and enhance perceptions of his future success, upward forecasts may be created even when no upward trends are occurring. Alternatively, if a manager performed poorly last period, the manager may adjust his forecasts upward as a promise of better performance in the future (Emmanuel, Otley, and Merchant, 1990, p. 169).

#### 3.6 Alter Resource Allocations

Forecasts help determine how resources should be allocated (Ansari and Euske, 1987; Covaleski and Dirsmith, 1986). For example, growth of one product line suggests increased capital investment to produce that product. Thus, managers may create forecasts that suggest allocating resources in a favorable way. This function of forecasting implies that forecasts often are negotiated (Burchell, Clubb, Hopwood, Hughes, and Nahapiet, 1980, Covaleski and Dirsmith, 1986) rather than estimated.

#### 3.7 Are Rational on a Cost/Benefit Basis

Managers may believe that the personal cost to them for developing simple mathematical models (not only money but personal time and effort) may be higher than the benefits gained from their use. Hence, they rationally avoid the use of these models.

#### 3.8 Allow Participation

Unlike SMM's, judgmental forecasts allow managers to participate in the forecasting process. Participation has a general relationship to job satisfaction (Emmanuel, Otley, and Merchant, 1990, p. 177).

### 3.9 Are Political

Forecasts often come from parts of the organization not under the direct control of the manager. Consequently, managers may believe that outside forecasts reflect someone's political agenda and may substitute their judgmental forecasts.

Citations are available from the author.

### 3.10 Extract Information

A forecast may be used to probe others. In this case a forecast is created which a manager can use to cross examine others and extract desired information (Covaleski and Dirsmith, 1986; Singer, 1994).

### 3.11 Shares Responsibility/Blame

In some cases a manager may want to avoid responsibility for a forecast and the resulting consequences. A group process can result many people sharing the responsibility/blame for the forecasts.

### 3.12 Can Improve One's Bonus

In some sales commission schemes, a manager can increase his bonus by setting the forecasts so the goals can be easily exceeded and a bonus generated (Emmanuel, Otley, and Merchant, 1990, p. 168).

## 4.0 Discussion and Conclusions

All of the above points suggest that managers are rational is preferring judgmental forecasts over those of mathematical models. In some ways this liberates the forecasters and forecasting systems from the tyranny of neglect.